

Remarks

At the outset, Applicants wish to thank Examiner Johnson for discussing the present application with the Applicants' attorney on October 12th and 16th, 2006, herein collectively referred to as the "Interview." In addition, Applicants wish to again thank the Examiner for allowance of Claim 23.

Claims 22-25 and 44-51 are pending in the present application. Claims 22 and 24 are amended herein to recite methods of making a reactive multilayer foil (RMF) that includes a plurality of openings, wherein the RMF is capable of reacting to form a self-contained source of heat. Support for these amendments may be found in the present application (with reference to Patent Application Publication No. 2004/0149813) at least in the Abstract and paragraphs [0021] and [0023]. Claim 22 is further amended to recite that the features of the substrate are used to create the apertures in the reactive multilayer foil. Support for this amendment may be found in the present application at least at paragraph [0076]. In addition, Claim 25 is amended to depend from Claim 22.

Claims 46-51 are new. These claims have been added by this amendment to provide Applicants with a more complete scope of protection. Support for newly added claims may be found in the application as published at least in paragraphs [0075]. No new matter is added by this amendment.

Applicants respectfully submit that Claims 22, 24, 25, and 44-51 are patentably distinct from all cited art, for at least the reasons set forth in detail below.

Claims 22, 24, 25, and 44-45 stand rejected under 35 U.S.C. Section 103 as unpatentable over U.S. Patent No. 5,497,938 (herein "McMahon") in view of U.S. Patent No. 5,266,132 (herein "Danen") and U.S. Patent No. 3,729,046 (herein "Kennedy"). To establish a *prima facie* case of obviousness based on a combination of references, three requirements must be satisfied: (1) the prior

art relied upon must contain some suggestion or motivation for combining the references to produce proposed modification; (2) the proposed modification must have had a reasonable expectation of success; and (3) the references must teach or suggest all claim limitations. *See In re Chu*, 66 F. 3d 292, 36 USPQ 2d 1089, 1094 (Fed. Cir. 1995); *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d 1443, 1444-6 (Fed. Cir. 1992); and MPEP § 2143. The burden of satisfying these requirements rests with the Examiner. *See* MPEP § 2142. Applicants respectfully submit that the cited references, considered alone or in combination, fail to teach or suggest each and every element of Claims 22, 24, 25, and 44-51, for at least the reasons set forth below.

The Office Action contends that McMahon teaches a tape substrate with openings containing inserted solder balls and that it would have been obvious to one of ordinary skill in the art to make the reactive foil of Danen by the method of Kennedy and substitute the resulting reactive foil for the apertured tape of McMahon.

Claims 22 and 24 of the present application recite methods of making an apertured reactive multilayer foil capable of reacting to form a self-contained heat source. According to the method recited in Claim 22, the apertures are formed in the reactive multilayer foil by depositing the foil on a substrate which includes features (i.e., preformed openings, bumps, or particles) which are used to create apertures in the foil. According to the method recited in Claim 24, a plurality of holes are mechanically pressed into the reactive multilayer foil.

However, as discussed in the Interview, the Office Action fails to establish how the combination of references teaches or suggests these methods. The Office Action provides no assertion that the substrate of McMahon includes features that are used to create apertures in the RMF, as called for in Claim 22. Furthermore, the Office Action fails to show a method for making a RMF capable of reacting to form a self-contained heat source including holes formed by mechanical

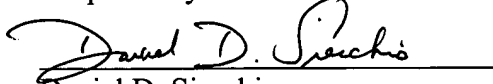
pressing, as called for in Claim 24. Applicants respectfully submit that even if one were to “modify tape of of (sic) McMahon to utilize the reactive multilayer foil in order to provide heat to reflow the solder (see Danen col. 1, ll. 5-65),” as suggested by the Office Action, this does not teach or suggest a method for making an apertured reactive multilayer foil using a patterned substrate (Claim 22) or by mechanical pressing (Claim 24). The Examiner’s assertion seems to be that the foil of Danen may be used to flow the solder balls inserted in the tape of McMahon. This does not in any way relate to the methods recited in Claims 22 or 24.

Furthermore, the Office Action fails to establish how the combined invention of McMahon and Danen can be modified to “utilize depositing and subsequently removing the multilayer foil on the substrate in order to effectively manufacture the foil.” This assertion does not teach or suggest a method for making a RMF having a plurality of apertures formed by a patterned substrate (Claim 22) or by mechanical pressing (Claim 24).

In sum, the Office Action and suggested combination of references does not in any way teach a method for forming apertures in a reactive multilayer foil capable of reacting to form a self-contained heat source, as is called for in Claims 22, 24, 25 and 44-51.

In view of the foregoing, it is respectfully submitted that all claims now patentably distinguish from all cited art. Accordingly, Applicants respectfully request that Claims 22, 24, 25, and 44-51 be placed in condition for allowance. Reconsideration and favorable action in this regard is therefore earnestly solicited.

Respectfully submitted,


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